

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 December 2003 (18.12.2003)

PCT

(10) International Publication Number
WO 03/104770 A2

(51) International Patent Classification⁷: G01N 15/00 (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/DK03/00384

(22) International Filing Date: 11 June 2003 (11.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/387,407 11 June 2002 (11.06.2002) US
PA 2003 00159 5 February 2003 (05.02.2003) DK

(71) Applicant (for all designated States except US): CHEMPAQ A/S [DK/DK]; Symbion Science Park, Fruebjergvej 3, Box 38, DK-2100 Copenhagen Ø (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LARSEN, Ulrik, Darling [DK/DK]; Solbakken 115, DK-2840 Holte (DK). ELKÆR, Preben, Merrild [DK/DK]; Nygådsvej 53, 1. Th., DK-2100 København Ø (DK).

(74) Agent: ALBIHNS A/S; H.C. Andersens Boulevard 49, DK-1553 Copenhagen V (DK).

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

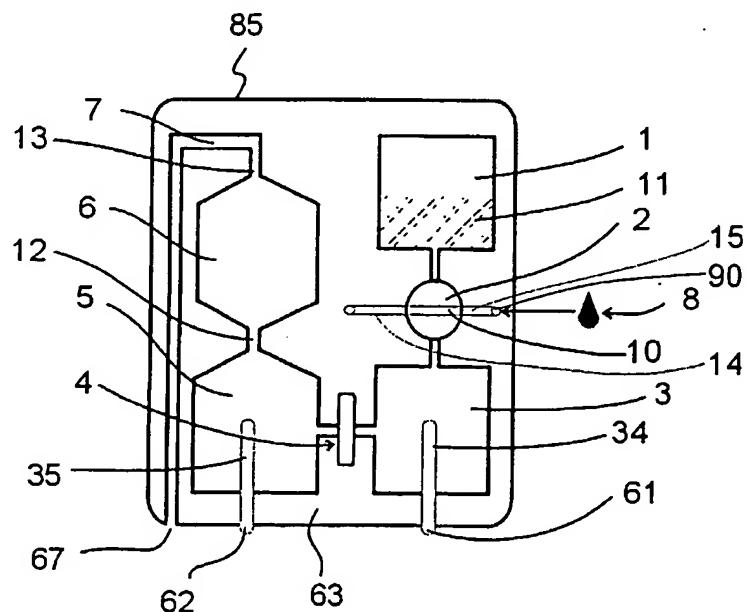
— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: A DISPOSABLE CARTRIDGE FOR CHARACTERIZING PARTICLES SUSPENDED IN A LIQUID



WO 03/104770 A2



(57) Abstract: The present invention relates to a particle characterization apparatus in which particles suspended in a liquid passes through an orifice or aperture for detection and characterization of the particles utilising impedance determination. In particular the invention relates to utilisation of a membrane of a polymer as a base material for precision machining of a sub-millimetre orifice. Forming the orifice in a polymer membrane facilitates the construction of a single use cartridge for haematology analysis due to low material and production costs.